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NORTHERN WISCONSIN SNOWMOBILERS:

Their Characteristics and Management Preferences

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THEIR CHARACTERISTICS AND MANAGEMENT PREFERENCES

Earl C. Leatherberry

Before the 1950's, there were only a few hundred snowmobiles in North America and most were used primarily for nonrecreation purposes. Public land managers did not see snowmobile use as a threat to the environment nor as a source of conflict with other recreation uses. However, within a decade (1962 to 1972) the sale of snowmobiles grew from 10,000 to 587,000 units per year (International Snowmobile Industry Association 1973). And today there are an estimated 2.6 million snowmobiles in operation in the United States.

In reaction to the relatively rapid increase in the use of snowmobiles, various segments of the public began to call for measures to regulate their use. Public land managers also began to notice environmental damages from the indiscriminate use of snowmobiles (Butcher 1972). In haste to deter apparent environmental damages and to appease public opinion, some public land management agencies adopted poorly conceived regulations and policies (Butler 1974). In some instances, regulations and policies were improvised or copied from other areas without reference to or consideration of local conditions.

In 1972, President Nixon issued Executive Order 11644--"The Use of Off Road Vehicles on Public Lands". In the order, the President called for each Federal land management agency to designate specific areas and trails on public land where the use of off-road vehicles may be permitted, and areas where they may not be permitted. Efforts to respond to this order have been accompanied by intensive feeling on both sides. Frequently, for the same decision, managers have been abused on the one hand for being snowmobile advocates and on the other for being antisnowmobile.

Because of the controversy surrounding the establishment of snowmobile regulations, managers should know something of their clientele's perception of the issues. For example, past research has shown that management decisions are sometimes made without adequate knowledge of the user and his attitudes about the issues (Moeller *et al.* 1974). Research has also shown that land managers are not always able to objectively perceive management policies that are acceptable to the user public (Hendee and Harris 1970).

As a first step toward filling this gap, a study was begun to gain some insight into how snowmobilers felt about alternative management strategies for regulating snowmobile use on public land. The study was intended not only to determine an average group response to the management alternatives but also to identify differences that may exist between different groups of snowmobilers.

The study focused on snowmobilers who resided close to large expanses of public land. It was presumed that those snowmobilers would be most affected by a particular management decision. For simplicity, the study focused on National Forest land in northern Wisconsin where management options for regulating snowmobiles and other off-road vehicles were under consideration.

The study was not designed to deal directly with policy nor does it advocate any particular management stance. It was designed solely to identify and survey a target population that, presumably, was aware and interested in policy issues.

THE STUDY AREA

The study area was the northern two thirds of Wisconsin (fig. 1). The area is sparsely populated with a density of 35 people per square mile. In 1975, there were 141,936 registered snowmobilers (53 percent of the State's total) or one for nearly every 9 people. More than 4 million acres of land, more than 20 percent of the total area, is publicly owned (10 percent county, 4 percent State, and 7 percent Federal). The Chequamegon and Nicolet National Forests represent the largest contiguous blocks of public land. Much of the area's potential for snowmobiling exists on these two Forests. The acreage essentially is unimproved, but old logging roads and trails can be found throughout the Forests. Most parts of the two Forests are within easy driving distance of the study area's villages and towns. In fact, any point within the study area is within approximately 100 miles of one of the Forests.

Figure 1.--*Location of the study area.*

STUDY PROCEDURES

In November 1973 a questionnaire, designed by George Banzhaf and Company of Milwaukee, was mailed to 1,200 randomly selected telephone subscribers who resided in Wisconsin and Michigan and 400 predetermined community leaders (George Banzhaf and Company 1974). The questionnaire was also submitted to a group of 260 snowmobilers, residents of the study area, who were participating in a wildlife-snowmobile research project at the Clam Lake Field Station of the University of Wisconsin in February and March of 1974.

From all completed questionnaires received a sample was selected consisting of those heads-of-household who indicated: (1) they or a member of their family were active snowmobilers, and (2) they resided within the established study area. A total of 225 respondents met the criteria for inclusion in the sample. Although not randomly selected, the sample is considered to be representative of snowmobilers of the study area.

STUDY RESULTS

The "typical" respondent was more rural oriented than the average resident of the study area and was better off financially. He lived on a farm or in a nonfarm rural setting or in a small town. He was employed as a craftsman or blue-collar worker and earned more than $13,000 per year, much more than the $7,600 average for the area.

More than half the respondents were avid fishermen and hunters (table 1). Recreational activities less intensively pursued included, trail bike riding, snowshoeing, dune buggy riding, and canoeing. The low participation rates, especially on a regular basis, for trail bike riding and dune buggy riding indicates that the use of other off-road vehicles is apparently not widespread among the snowmobilers surveyed.

Sixty five percent reported that they belonged to at least one conservation group or outdoor recreation organization. Membership in snowmobile clubs was the first-mentioned organization by 53 percent of the respondents. Memberships in hunting, fishing, and sportsmen-related organizations were mentioned first by 8 percent of the respondents. The remaining clubs and organizations reported were mostly community-oriented groups, such as property associations and youth organizations.

The respondents were asked to express agreement or disagreement with several policy statements regarding snowmobile use, ranging between the extremes of prohibiting all use to placing no restrictions on use (table 2).

Most respondents agreed that use should be restricted to trails, that certain areas

Table 1.--*Participation rates in selected outdoor recreation activities by respondents*
(In percent)

Activity and number of respondents	Participation rates (number of times past 3 years)			
	None	Once	2 to 10 times	More than 10 times[1]
Fishing (N=225)	11	2	27	60
Hunting (N=225)	28	2	28	58
Long hikes (more than 1 mile) (N=221)	41	8	25	26
Short hikes (nature trails) (N=224)	29	10	36	25
Camping (N=218)	24	11	41	24
Bicycling (N=220)	48	2	27	23
Horseback riding (N=221)	67	8	12	13
Trail bike riding (N=221)	68	6	14	11
Snowshoeing or cross-country skiing (N=221)	76	5	10	8
Canoeing (N=220)	63	9	22	6
Dune buggy or all terrain vehicle riding (N=220)	79	8	9	4

[1]Considered to be on a regular basis.

Table 2.--*Respondent's reaction to five alternatives for regulating snowmobile use on National Forest land*
(In percent)

Alternative and number of respondents	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Set aside areas for no use (N=224)	39	46	6	6	3
Restrict to trails or routes (N=220)	32	37	4	19	9
Allow use anywhere in certain areas both on and off trails (N=224)	12	40	12	23	13
Prohibit all use (N=224)	3	1	4	50	42
Do not restrict use (N=220)	3	10	2	46	39

should be set aside where no use is allowed, and that use should be allowed in certain areas both on and off trails. Very few advocated unrestricted use or prohibiting all use. Attitudes were fairly clear-cut toward all but one alternative statement: setting aside areas for use both on and off trails. Here there was no strong consensus.

On the assumption that the greatest opposition to proposed regulations to limit snowmobile use would come from snowmobile club members, responses from members of such groups were analyzed separately. The assumption proved false--there was no significant differences in viewpoint between members and nonmembers (table 3).

DISCUSSION

The snowmobilers surveyed felt that some types of restrictions were necessary on snowmobiles that operate on public land. They agreed that vehicles should be restricted to trails and that some areas should be

Table 3.--*Differences between respondents in mean intensity of feeling toward use restrictions*

Alternative	Mean scores[1]	
	Affiliated respondents (N = 119)	Nonaffiliated respondents (N = 106)
Set aside areas for no use	0.94	0.81
Restrict to trails or routes	1.34	1.27
Allow use anywhere in certain areas both on and off trails	1.79	1.91
Prohibit all use	3.29	3.28
Do not restrict use	3.12	3.13

[1]Values range from 0 to 4. Value of 0 indicate strong agreement, value of 4 strong disagreement.

preserved for no vehicle use. But when asked if vehicles should be allowed to operate anywhere in certain areas, both on and off trails, the composite opinion was close to a neutral or undecided stance. This stance may be related, in part, to the ambiguity of the statement. Nevertheless, one might suspect that snowmobilers would strongly favor off-trail use on public land and that they would be more inclined to prefer less restrictions. Apparently, the snowmobilers surveyed also appreciate other outdoor recreational activities and values. For example, respondents surveyed perceived themselves as "outdoor men" actively engaging in hunting and fishing as recreation activities. They may engage in snowmobiling because during the winter few other outdoor recreation alternatives are available.

Membership in snowmobile clubs did not have a statistically significant influence on attitudes toward the suggested management alternatives. However, research results have shown that advocacy organizations, such as snowmobile clubs, are formed to present the views of members on specific local problems (Irland and Vincent 1974). Typically, snowmobile clubs, through their spokesmen, express great concern about proposed regulations to delimit the area in which snowmobiles are allowed to operate. Perhaps in the future, affiliation with snowmobile clubs will be more important to the individual snowmobiler. Two major factors point in that direction. First, there is an apparent leveling off in the number of novice snowmobilers (Knopp and Tyger 1973). Second, the present trend in regulating snowmobile use appears to be toward designating use areas. So, the need for a more uniform and pragmatic mechanism to advocate the goals of snowmobilers will probably increase. The recent growth in the number of snowmobile user organizations and members suggests that snowmobilers are, in fact, becoming more organized. In Wisconsin, such groups currently represent approximately 47 percent of all snowmobilers (Wisconsin Department of Natural Resources and Upper Great Lakes Regional Commission 1974). Given a continued increase in membership, public land managers may be destined to face increasingly organized pressures from snowmobilers for what they perceive to be their fair share of the action.

CONCLUSIONS

The rapid growth of the use of snowmobiles in the late 1960's and early 1970's has begun to subside--the popularity of snowmobiling seems to be leveling off. However, the management concerns related to the use of snowmobiles on public land are still prevalent.

Our study indicates that snowmobilers as a group hold no radical viewpoints, one way or the other, on snowmobile use. They would seem to be amenable to reasonable regulations regarding the use of their vehicles. This attitude should encourage and guide land managers in making decisions concerning snowmobile use.

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